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EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 56138863
PUBLICATION DATE : 29-10-81

APPLICATION DATE : 31-03-80
APPLICATION NUMBER : 55040232

APPLICANT : TOSHIBA CORP;

INVENTOR : SATO YUJI;

INT.CL. : H01M 2/16

TITLE : SEPARATOR FOR BATTERY



ABSTRACT : PURPOSE: To increase the liquid retaining property and the mechanical strength of a separator, by preparing the separator from nonwoven cloth consisting of three kinds of fibers, the diameters of which are within a given range and the ratios of the diameters of which are within a given range.

CONSTITUTION: A separator is prepared from nonwoven cloth 4 which consists of at least three kinds of fiber having a different fiber diameter from each other, a minimum diameter fiber 1, medium diameter fibers 2 and 3, and a maximum diameter fiber 4. The diameters of all these fibers are within a range of 1~20 μ . The diameter of the maximum diameter fiber 4 is selected to be 7~15 times the diameter of the minimum diameter fiber 1. The diameters of the medium diameter fibers 2 and 3 are preferred to be 2~8 times the diameter of the minimum diameter fiber 1. Here, these fibers are made of an organic synthetic high molecular compound such as polyamide, polypropylene or polyacrylonitrile.

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EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 10312786
PUBLICATION DATE : 24-11-98

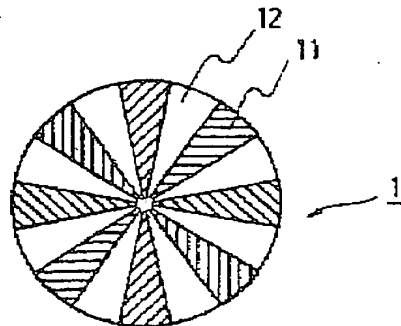
APPLICATION DATE : 13-05-97
APPLICATION NUMBER : 09139355

APPLICANT : JAPAN VILENE CO LTD;

INVENTOR : TOKUTAKE NOBUTOSHI;

INT.CL. : H01M 2/16 D04H 3/00

TITLE : SEPARATOR FOR ALKALINE
BATTERY



ABSTRACT : PROBLEM TO BE SOLVED: To provide a separator excellent in alkali resistance and electrolyte holding property and improve the yield of its manufacture by applying the hydrophilic process to a nonwoven fabric applied with the split process of split fibers, the tangle process of fibers, and the fusion process of fusion fibers to a fiber web containing multiple split fibers capable of generating polyolefin extra-fine fibers, high-strength fibers, and fusion fibers at specific % respectively.

SOLUTION: The hydrophilic process is applied to a nonwoven fabric applied with the split process of split fibers, the tangle process of fibers, and the fusion process of fusion fibers to a fiber web containing split fibers A₁ of 5-40 mass % capable of split-generating polyolefin extra-fine fibers A₁12 and ethylene-vinyl alcohol copolymer extra-fine fibers A₂11 by a physical action, split fibers B₁ of 20-55 mass % capable of split-generating only polyolefin extra-fine fibers B₁12 by a physical action, high-strength fibers of 20-45 mass % having the single fiber strength of 5 g/d or above, and fusion fibers of 20-35 mass % having the resin component with the melting point lower than the melting point of the constituting resin components of the split fibers A₁, B₁ and the high-strength fibers.

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